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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,530	07/24/2003	Stuart K. Janikowski	LIT-PI-344.3D1	2921

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EXAMINER

LAMB, BRENDA A

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 02/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/627,530	Applicant(s) JANIKOWSKI ET AL.	
	Examiner Brenda A Lamb	Art Unit 1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/15/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-2, 4-13 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Argyle et al in view of Beck.

Argyle et al teaches a system for applying a modifying composition to a substrate. Argyle et al teaches the system includes a processing chamber which is configured to accept a treatment mixture to a substrate as it move there through. Argyle et al teaches the passageway that extends through the chamber which may be rectangular in cross-section and the Argyle et al processing chamber is capable of passing a sheet-like substrate such as within the scope of claim 5-6 which applicant has defined as a non-equidimensional substrate (see column 7 lines 44-50 and column 26-31). Further, the Argyle et al rectangular passageway 14 through the chamber, which

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includes the opening of the end seals, is capable of accepting a substrate that substantially matches or is slightly larger than the substrate. Argyle et al teaches that his process chamber treats in his chamber a fixed range in sizes of substrates of a given cross-sectional shape. Argyle et al fails to teach an adjustable seal which adjusts for various sizes of non-equidimensional substrates and the adjustable seal contains a seal gas such that fluids within the system are unable to leak into the atmosphere surrounding the system. However, it would have been obvious to modify the Argyle et al apparatus by substituting its gas barriers at the entry end of the processing chamber which prevent leakage of the contents of the processing chamber with an adjustable gas barrier such as taught by Beck for the obvious advantage of enabling one to treat a variety of sizes of a substrate of a given cross-sectional shape and especially since Argyle teaches the desirability of treating a variety of sizes of a substrates of a given cross-section in his process without frictional engaging the substrate. With respect to claim 2 and 4-5, Argyle et al shows the processing chamber includes a first region, second region and a constricted medial region between first and second region. The functional recitation that the modifying agent is separated from the carrier medium upon a pressure drop when the treatment is introduced in the manner set forth in claim 2 has not been given patentable weight because it is narrative in form. In order to be given patentable weight, a functional recitation must be expressed as a "means" for performing the specified function, as set forth in 35 USC § 112, 6th paragraph, and must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional language. In re Fuller, 1929 C.D. 172; 388 O.G. 279. Further, the Argyle

et al rectangular passageway 14 through the chamber, which includes the opening of the end seals, is capable of accepting a substrate that essentially matches or is slightly larger than the substrate. With respect to claim 7, the functional recitation that the non-equidimensional substrate is removed from the exit seal at the same rate that the non-equidimensional substrate is continuously fed into the chamber through the entry seal has not been given patentable weight because it is narrative in form. In order to be given patentable weight, a functional recitation must be expressed as a "means" for performing the specified function, as set forth in 35 USC § 112, 6th paragraph, and must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional language. In re Fuller, 1929 C.D. 172; 388 O.G. 279. In any event, the Argyle process chamber as modified has been configured such that elements of the process chamber do not frictionally engage the substrate and the absence of such frictional engagement within the process chamber would obviously enable one to remove the substrate from the process chamber at the same rate at which one can feed the substrate. With respect to claims 8-11, Argyle et al has a plurality of chambers on either side of the processing chamber which seal and supply an inert gas at a pressure high enough to prevent leakage of the treatment material from the processing chambers and those gas filled chambers reads on a sealing chambers (entry and exit seal) and expansion chamber, a chamber into which pressurized gas expands, are arranged in a manner within scope of claim 8. Further, Argyle et al entry seal and exit seals are fluid filled and are capable of exerting a pressure slightly greater than the pressure in the expansion chamber via pressure flow valve in the treating system. With respect to

claims 12-13, Argyle et al teaches pressure and temperature levels in the processing chamber are controlled obviously via the combination of heating means 70, the heating means controls pressure and temperature of the material in material source 66, and means to control flow of material from material source 66 to the processing chamber (valve 78 and pump 79). With respect to claim 15, Argyle et al teaches as discussed above that his process chamber treats in his chamber a fixed range in sizes of a substrates of a given cross-sectional shape but fails to teach an adjustable exit seal which adjusts for various sizes of non-equidimensional substrates. However, it would have been obvious to modify the Argyle et al apparatus by substituting its gas barriers at exit end of the processing chamber which prevent leakage of the contents of the processing chamber with an adjustable gas barrier such as taught by Beck for the obvious advantage of enabling one to treat a variety of sizes of a substrate of a given cross-sectional shape and especially since Argyle teaches the desirability of treating a variety of sizes of a substrates of a given cross-section in his process without frictional engaging the substrate. With respect to claim 16, the recitation that the adjustable entry seal is configured for accepting a non-equidimensional substrate which is corrugated as set in the instant claim does not structurally define over Argyle et al in that Argyle et al rectangular opening as modified is capable of accepting a Argyle et al corrugated substrate dependent on the degree of corrugation. Further, the recitation that the process chamber is configured to accept a plurality of substrate arranged adjacent one another such as set forth in claim 17 or process chamber is configured to accept a plurality of substrate arranged adjacent one in a manner such as set forth in claim 18

does not define applicant's invention over Argyle et al since the Argyle et al process is capable of accepting one or multiple substrates, arranged in side-by-side configuration obviously forming a sheet-like material, as long as the configuration or cross-section of the material in its totality being treated has cross-section which is rectangular or sheet-like configuration.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Argyle et al in view of Beck and Godley 2,545,576.

Argyle et al and Beck are applied for the reasons noted above, Argyle fails to teach the apparatus is further comprised of a substrate feed controller. However, it would have been obvious to modify the Argyle et al apparatus to provide a substrate feed controller such as taught by Godley to control speed at which substrate is passed through the system for the taught advantage increase uniformity of deposition of material onto the traveling substrate.

Note the rejection over Boerger et al taken alone in the first office mailed 7/12/2004 should have included claims 5-6 as indicated on the last line of page 5 of the first office mailed 7/12/2004.

Claims 1, 4-6, 8-11, 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boerger et al in view of Beck.

Boerger et al. teaches a system for applying a composition to a substrate. Boerger et al shows that his system includes a processing chamber, which is configured to accept a composition within scope of the claim as the substrate is moved there through. Boerger et al shows in Figures 1-2 that the processing chamber accepts a

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sheet-like substrate, which is within the scope of claims 1 and 5-6. Boerger et al fails to teach an adjustable entry seal containing a seal gas such that fluids within the system are unable to leak into the atmosphere surrounding system. However, it would have been obvious to modify the Argyle et al apparatus by substituting its gas barriers at the entry end of the processing chamber which prevent leakage of the contents of the processing chamber with an adjustable gas barrier such as taught by Beck for the obvious advantage of enabling one to treat a variety of sizes of a substrate of a given cross-sectional shape. With respect to claims 8-11, Boerger et al teaches at column 5 lines 5-10 that transitional unit 1 is arranged at the entry and exit end of the processing chamber. The Boerger et al transitional unit 1 seals to prevent leakage of the reactive atmospheres of the processing chamber. The Boerger et al transitional unit 1 as shown in Figures 1-2 have multiple chambers reading on applicant's claimed expansion chamber or chamber into which gas expands into sealing chamber. Boerger et al teaches at column 5 lines 59-64 that compartment 7 or entry/exit seal is at a higher pressure than compartment 8, 9 or entry or exit seal. Boerger et al teaches pressure in the chamber/seals/expansion chamber is maintained by a gas which is inert with respect to the treatment mixture. With respect to claims 4, Boerger et al's exit seal matches the cross-sectional shape of the substrate. Further with respect to claim 15, Boerger et al fails to teach an adjustable exit seal which adjusts for various sizes of non-equidimensional substrates for modification. However, it have been obvious to modify the Boerger et al by substituting its gas barriers at the entry end of the processing chamber which prevent leakage of the contents of the processing chamber with an

adjustable gas barrier such as taught by Beck for the obvious advantage of enabling one to treat a variety of sizes of a substrate of a given cross-sectional shape. With respect to claim 16, the recitation that the adjustable entry seal is configured for accepting a non-equidimensional substrate which is corrugated as set forth in the instant claim does not structurally define over Boerger et al in that Argyle et al rectangular /sheet-like opening as modified is capable of accepting a corrugated material dependent on the degree of corrugation of the substrate. Further, the recitation that the process chamber is configured to accept a plurality of substrate arranged adjacent one another such as set forth in claim 17 or process chamber is configured to accept a plurality of substrate arranged adjacent one in a manner such as set forth in claim 18 does not define applicant's invention over Boerger et al since the Boerger et al process is capable of accepting one or multiple substrates, arranged in side-by-side configuration obviously forming a sheet-like material, as long as the configuration or cross-section of the material in its totality being treated has a cross-section which is rectangular or sheet-like configuration.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boerger in view of Beck and Godley 2,545,576.

Boerger et al is applied for the reasons noted above. Boerger et al fails to teach the apparatus is further comprised of a substrate feed controller. However, it would have been obvious to modify the Boerger et al apparatus to provide a substrate feed controller such as taught by Godley to control speed at which the substrate is passed

through the system for the taught advantage of increasing uniformity of deposition of material onto the traveling substrate.

Claims 5-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5-6 is confusing since it is unclear how the processing chamber at lines 1-2 of claim 5 and claim 6 relates to the processing chamber at line 3 of claim 5 and claim 6.

Applicant's arguments with respect to claims 1-2 and 4-15 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brenda Lamb whose telephone number is (571) 272-1231. The examiner can normally be reached on Monday and Wednesday thru Friday with alternate Tuesdays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lamb/LR
January 27, 2005


BRENDA A. LAMB
PRIMARY EXAMINER